THE IMPACT OF THE TEACHING APPROACH ON STUDENT PERFORMANCE AND PERCEPTION OF FIRST OOP COURSE: CASE STUDY AT FTMSK, SHAH ALAM

INSTITUT PENYELIDIKAN, PEMBANGUNAN DAN PENGKOMERSILAN
UNIVERSITI TEKNOLOGI MARA
40450 SHAH ALAM, SELANGOR
MALAYSIA

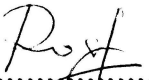
PREPARED BY :

ROSMAH ABDUL LATIF
DALIALAH ABDUL GHANI
NORATIKAH SAMSUDDIN
ZULAILE MABNI

JANUARI 2006

PROJECT TEAM MEMBERS

ASSOCIATE PROF. ROSMAH ABDUL LATIF
Project Leader



.....
Signature

ASSOCIATE PROF. DALIALAH BINTI ABDUL GHANI

Project Member

.....
Signature

NORATIKAH BINTI SAMSUDDIN

Project Member

.....
Signature

ZULAILE BINTI MABNI

Project Member

.....
Signature

ABSTRACT

Object Oriented Programming (OOP) courses have been taught since 1998 at Universiti Teknologi MARA (UiTM). The syllabus of the first Object-oriented programming course covers basic knowledge in problem solving using object-oriented programming. There are currently two approaches applied to the course: Structured-First-Object-Last(SFOL) and Object–First–Structured-Last(OFSL) approaches. As of now, there is no published study done in Malaysia on the effect of the two different teaching approaches on the students' performance. This study examines student performance: their grades and their problem solving skills. This study involves six groups of students enrolled for the first level of OOP course over a period of three semesters. For each semester, two groups each were taught using the SFOL and the OFSL approaches. At the end of each semester, questionnaires were distributed to all group members to examine the students' ability to solve problems. The data analysed in this study comprise of students' performance, measured through their course work and the final examination results and students problem solving skill using scores obtained from students' answers to problems in the questionnaire. The correlation between students' performance and their problem solving skill is also investigated. Student perceptions towards the course taught also is determined through questionnaire. The correlation between student perception and their performance is also investigated. This study appraises the current teaching method and it is found that students taught using the SFOL approach perform better than those taught using the OFSL approach.

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

1.1 Background of The Problem

Programming is an important subject in pursuance of any degree related to Information Technology or Computer Science. At Universiti Teknologi Mara (UiTM), Object Oriented programming is a core subject where students must enroll in starting from their first semester at university.

Teaching programming languages has long been a challenge in the classroom. The leaning curve is a step function for many students; such students struggle to assimilate the concepts involved in the early stages, making little progress and becoming more and more confused, until all of a sudden, the "penny drops". Overcoming this step is crucial; sadly, some students never make it, either failing or withdrawing.

1.2 Problem Statement

Teaching programming effectively in today's mass Higher Education is a problem. Sometimes all these things happened because students do not understand the subject matter. Research has shown that success in language learning is greatly influenced by numerous factors. Among them are the methodology used, the teacher themselves, the